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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,835	06/30/2003	Cary Safe	736.003US1	3890

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EXAMINER

BELLINGER, JASON R

ART UNIT PAPER NUMBER

3617

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/612,835	Applicant(s) SAFE ET AL.	
	Examiner Jason R. Bellinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 16 and 25 is/are allowed.
- 6) ☒ Claim(s) 10-15, 17-19 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claim 10 is objected to because of the following informalities: It is believed that the term "n" should be removed from line 2 of the claim for grammatical clarity; given the fact that variable "n" in the equation $[90-(360/2n)]$ has already been defined as the number of driving lugs immediately following the equation.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 10-15, 17-19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagorcka. In Figures 5-6 and 11, Nagorcka shows a vehicle having a track with inner and outer surfaces; the inner surface includes a plurality of driving lugs 11 attached thereto, while the outer surface engages the ground. A driver sprocket 5, having a central axis about which the sprocket 5 rotates, includes a driving portion 7 that includes a center.

The sidewalls of the drive lugs 11 make an angle 13 with respect to the inner surface of the track such that when the driving lug 11 engages the driver sprocket 5, the sidewall of the lug 11 presents a surface that is non-parallel to a radial line or plane acting from the central axis of the sprocket 5 through the center of the driving portion 7 of the drive sprocket 5.

As best understood, Nagorcka does not specify the angle 13 formed by the first sidewall of the driving lugs 11 with respect to the pitch line of the track is in the range of $[90 - (360/2n)] \pm 5, 3, 2, 1, \text{ or } 0$ degrees {n being the number of driving lugs on the track}. As shown in Figure 5, the angle 13 formed by the sidewall of the driven lug 11 with respect to the pitch line of the track is clearly less than 90 degrees.

Therefore, given that the angle 13 of Nagorcka is clearly shown as being less than 90 degrees, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the angle of the first sidewall of the driving lugs 11 at any angle less than 90 degrees that would be suitable to cause a positive interaction between the driving lug 11 and drive portion 7 of the sprocket 5, for the purpose of preventing slippage between the track and sprocket 5, thus reducing wear of both the track and the sprocket 5. (See column 9, line 49 through column 10, line 4 for Nagorcka's discussion of the advantages of the taught configuration of the drive belt).

Nagorcka shows the second sidewall of the driving lug 11 having an angle 13 substantially equal to the first angle 13 of the first sidewall. The angle 13 of the first sidewall forms a line that is non-parallel to a line from the axis of the sprocket 5 through the driving portion 7. This non-parallel line intersects the radial line extending from the central axis of the sprocket 5 through the driving portion 7 of the sprocket 5 at a point below the pitch line of the track. The non-parallel line also presents a surface to the driving portion 7 of the sprocket that declines toward the surface of the track. The driving portions 7 are substantially equally radially spaced about the sprocket 5.

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4. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagorcka as applied to claims 10-15, 17-19, and 24 above, and further in view of Witt. Nagorcka does not show the driving portions of the sprocket being rotatable sleeves.

Witt teaches the use of a sprocket 12 having driving portions formed of rotatable sleeves 126. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the sprocket of Nagorcka with rotatable sleeve driving portions as a substitution of equivalent sprocket wheels, in order to reduce the wear of both the driving portions of the sprocket and the driven lugs of the track.

Allowable Subject Matter

5. Claims 1-8, 16, and 25 are allowable over the prior art.

6. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 17 February 2006 have been fully considered but they are not persuasive. The Applicant argues that claim 10 sets forth the drive sprocket having "n number of driving portions" and the angle of the sidewall of the drive lugs being in the range of $[90 - (360/2n)]$ plus or minus 5 degrees (with emphasis added).

However, it should be noted that claim 10 also states immediately following the equation that "n is the number of driving lugs". Therefore, it is believed that the first occurrence of the term "n" in line 2 of claim 10 is a typographical error.

8. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the angle of the sidewall(s) of the driving lugs is defined by the number of driving portions of the sprocket) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It should be noted that Nagorcka does set forth a relationship between the angle 13 of the sidewall of the driving lugs 11 with the radius of the sprocket driving portions 7 and the diameter of the sprocket 5 (see column 8, lines 6-19). Nagorcka further defines other dimensions of the driving lugs 11 with respect to various elements of the track assembly (see column 8, lines 20-26).

Furthermore, it is well known in the art that a relationship exists between the size of the sprocket, the distance between the driving portions of the sprocket, the length of the track, distance between the driving lugs, and the number of driving lugs. Therefore, based on the relationships set forth above, it would be obvious to one of ordinary skill in the art that at least some prior art tracks (including that set forth by Nagorcka) will meet

the limitations of the formula set forth in claim 10, dependent upon the number of driving lugs present on the endless belt.

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

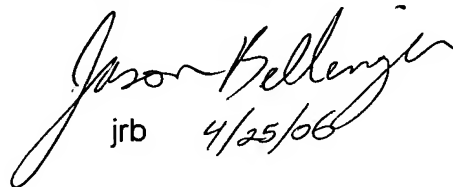
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617


jrb 4/25/06